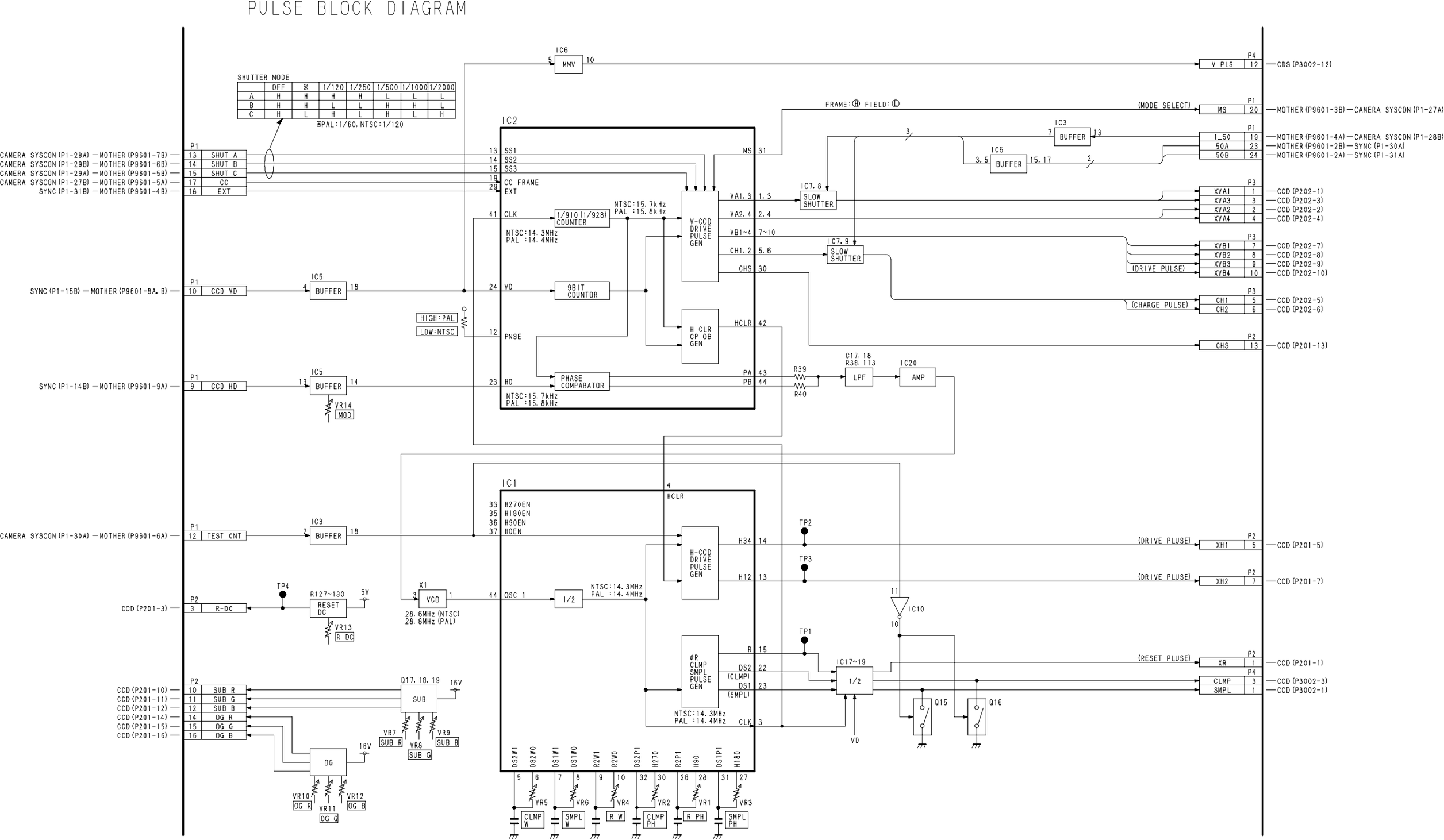PULSE BLOCK DIAGRAM